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Federal Communications Commission

Office of the Secretary

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AUDIO SERVICES
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September 5, 1991

ORIGINAL

Ms. Donna R. Searcy
Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

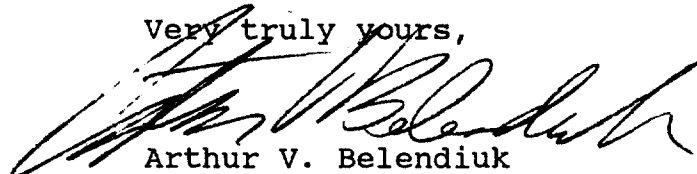
RE: Jamie Leigh Woods
File No. BPH-910225MH
Rosamond, California

Dear Ms. Searcy:

Transmitted herewith, on behalf of Jamie Leigh Woods, are an original and four copies of an Opposition to Informal Objection in the above-referenced proceeding.

If there are any questions with respect to this matter, please communicate with the undersigned.

Very truly yours,



Arthur V. Belendiuk
Counsel for
JAMIE LEIGH WOODS

AVB/pn
Enc.

cc: Howard J. Barr, Esquire

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FM EXAMINERS

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Before the
Federal Communications Commission

SEP - 5 1991

Washington, D.C. 20554

Federal Communications Commission
Office of the Secretary

In re Application of)

JAMIE LEIGH WOODS)

File No. BPH-910225MH

For Construction Permit)
for a New FM Station on)
FM Channel 228A at)
Rosamond, California)

TO: Mass Media Bureau

OPPOSITION TO INFORMAL OBJECTION

Jamie Leigh Woods ("Woods"), by counsel, hereby submits her opposition to the Informal Objection filed by Dianne K. Hitt ("Hitt").

As demonstrated below and in the attached engineering statement of Richard L. Biby, the Informal Objection filed by Hitt is premised on a flawed interpretation of the pertinent FCC rules and has no foundation in fact. Contrary to the assertions made by Hitt, the Woods application fully meets the requirements of the Commission's rules with respect to obstructions to the 70 dBu signal within the principal community of license.¹ Further, Hitt in her Opposition misstates the boundaries of Rosamond when she equates the community of Rosamond with the postal delivery boundaries in the Rosamond area. Finally, Hitt's Informal Objection is based on a flawed computational methodology.

Hitt correctly states that Rosamond is an unincorporated area within Kern County. Rosamond, however,

¹ 47 C.F.R. § 73.315(a).

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is a census designated place. The FCC, for purposes of Section 307(b) channel allocations, defines a community as an incorporated area or an unincorporated area listed as a census designated place.² Hitt did not rely on the census designated boundaries. Rather, she submitted the boundaries for the area served by the Rosamond post office as the boundaries of the community of Rosamond. As discussed in detail in the Declaration of Richard L. Biby, post office delivery boundaries and the boundaries of a community are different. One post office often delivers mail to several distinct communities. Likewise, the boundaries for sewer, water, police and fire protection can be and often are greater than the community of license itself. Hitt offers no justification for deviating from the Commission's well established policy that an unincorporated community is defined by its census designated boundaries.

The net effect of Hitt's attempt to define the boundaries of Rosamond as the area served by the Rosamond post office is to significantly expand the boundary of the community of Rosamond. Thus, while Woods' proposed 70 dBu contour covers all of Rosamond, based on the census definition of the boundaries of Rosamond, it does not cover the entire area served by the Rosamond post office. In short, by expanding the boundaries of the community of

² Revision of FM Assignment Policies and Procedures, 51 RR 2d 807, 816 (1982).

Rosamond, Hitt has also expanded the area she claims the Woods application does not serve.

The Woods proposal fully meets the pertinent FCC principal community signal strength requirement. Its 70 dBu signal strength contour, predicted in exact accordance with the method outlined in Section 73.313 of the FCC Rules totally encompasses the Rosamond census designated place. The Woods application thus meets the principal community signal strength requirements as set forth in Section 73.315(a).


Finally, Hitt's Informal Objection is based on flawed methodology. Hitt's supplemental coverage showing is defective. For example, no computations are offered in the Objection. No attempt was made by Hitt to quantify signal strengths in "shadowed" regions. Rather, the unsubstantiated assumption was made that any intervention of terrain into a give propagation path would cause a total loss of signal. Hitt's engineering showing is not properly supported and therefore must be rejected as defective.³

³ See, Amendment of Section 73.202(b) Table of Allotments FM Broadcast Stations, Creswell, Oregon, 67 RR 2d 56 (M. Med. Bur. 1989).

Accordingly, for the reasons stated above, Hitt's
Information Objection should be dismissed.

Respectfully submitted,

JAMIE LEIGH WOODS

By: 
Arthur V. Belendiuk
Her Attorney

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September 5, 1991

ROSAMOND/PN/OPPINFIRM.OBJ

Engineering Statement in re:
Response to Informal Objection
by Diane K. Hitt to the
Application of Jamie Leigh Woods
For Construction Permit for
a New FM Station on FM
Channel 228A at Rosamond, CA
FCC File No. BPH-910225MH

Overview

This engineering statement has been prepared on behalf of the Jamie Leigh Woods ("Woods") application for authority to construct a new commercial FM broadcast station to serve the community of Rosamond, California on Channel 228A.

Diane K. Hitt ("Hitt"), a mutually exclusive applicant for Chan. 228A at Rosamond, has filed an informal objection against the Woods application (BPH-910225MH), in which it is asserted that the transmission facilities as proposed by Woods would fail to provide a predicted signal strength of 70 dBu or greater over the entirety of Rosamond, as required by §73.315 of the FCC Rules and Regulations ("the FCC Rules").

The Hitt objection is based on an apparent fundamental misunderstanding of the FCC-mandated principal community signal coverage requirements. Contrary to the assertions made by Hitt, the Woods proposal does fully meet those requirements, as will be shown herein.

Principal Community Signal Coverage Requirement

Principal community signal strength requirements are stated in §73.315(a) of the FCC Rules:

"The transmitter location shall be chosen so that, on the basis of the effective radiated power and antenna height above terrain employed, a minimum field strength of 70 db above one uV/m (dBu) or 3.16 mV/m, will be provided over the entire principal community to be served.

Characterization of the Rosamond, California, Community

Rosamond, California is identified in both the 1980 and the 1990 Censuses of the United States as being a Census Designated Place ("CDP"). The U.S. Department of Commerce Bureau of the Census publication, "1990 Census of Population and Housing, Public Law 94-171 Data on CD-ROM, states:

"Places, for the reporting of decennial census data, include census designated places and incorporated places."

Thus, a CDP is the Census equivalent of an incorporated place, the distinction being that the boundaries of incorporated places have been fixed by a body having the legal authority to do so, whereas CDP boundaries are defined by the Bureau of the Census in the above referenced publication, as follows:

"Census designated places (CDPs) are delineated for the decennial census as the statistical counterparts of incorporated places. CDP's comprise densely settled concentrations of population that are identifiable by name, but are not legally incorporated places. Their boundaries, which usually coincide with visible features or the boundary of an adjacent incorporated place, have no legal status, nor do these places have officials elected to serve traditional municipal functions. CDP boundaries may change with changes in the settlement pattern; a CDP with the same name as in previous censuses does not necessarily have the same boundaries.

Beginning with the 1950 census, the Census Bureau, in cooperation with State Agencies and local census statistical areas committees, has identified and delineated boundaries for CDP's. For the 1990 census, the name of each such place is followed by "CDP." For the 1980 census, "(CDP)" was used; for 1970, 1960 and 1950 censuses, these places were identified by "(U)", meaning "unincorporated place."

To qualify as a CDP for the 1990 census, an unincorporated community must have met the following criteria:

1. In all States except Alaska and Hawaii, the Census Bureau uses three population size criteria to designate a CDP. These criteria are:

- a. 1,000 or more persons if outside the boundaries of an urbanized area (UA) delineated for the 1980 census or a subsequent special census.

- b. 2,500 or more persons if inside the boundaries of a UA delineated for the 1980 census or a subsequent special census.

- c. 250 or more persons if outside the boundaries of a UA delineated for the 1980 census or a subsequent special census, and within the official boundaries of an American Indian reservation recognized for the 1990 census."

(The referenced Census Bureau publication then continues with CDP definitions for cases that are not pertinent to the instant discussion.)

Thus, Rosamond, California, is a place, with definite boundaries, officially established by the U.S. Government. For reasons not articulated in the instant informal objection, Hitt has attempted to re-define the boundaries of Rosamond as being somehow related to the postal delivery zone of the Rosamond and the Edward's Air Force Base post offices.

The illogical nature of Hitt's attempt to usurp the authority of the Census Bureau can be illustrated by considering the difference between a small rural community and the extent of the delivery zone that is served by that community's post office. For example, the town of Washington, Virginia, which is located about fifty miles from the District of Columbia.

The entire extent of Washington is about two blocks by perhaps four blocks; the population is about 250 persons. The total length of all the streets in town amounts to no more than about one mile. However, according to officials at the Washington Post Office, the length of the rural delivery route, served from the Washington Post Office, is more than fifty (50) miles. There is absolutely no reason to confuse one with the other. Washington (town) has definite boundaries, specified by a responsible governmental entity (i.e., the Commonwealth of Virginia), and so does Rosamond, California.

It is noted that the 1990 census had not been completed at the time that Woods application was being prepared. At the present time, numerical data resulting from the 1990 census are available and have been used in the instant study, where appropriate. However, there is a delay of some several weeks in the availability of the official U.S. Census Bureau printed map of the Rosamond CDP. That map has been ordered, and additional information will be filed with the Commission if, upon receipt of the map data, it is determined that the conclusions reached in the instant report are in need of adjustment.

In sum, Rosamond is a community with officially defined boundaries, in which place there reside 2,869 persons, according to the 1980 census, and 7,430 according to the 1990 census.

Predicted Signal Strength Over Rosamond

Based on an effective radiated power ("ERP") of 3.0 kW and an effective antenna height above terrain ("HAAT") of 91 meters as specified in BPH-910225MH, the 70 dBu (3.16 mV/m) signal strength contour, predicted in exact accordance with the method outlined in §73.313 of the FCC Rules, totally encompasses the Rosamond CDP. Thus, the Woods proposal fully meets the pertinent FCC principal community signal strength requirement without qualification.

Characterization of Terrain in Rosamond and Vicinity

The terrain within the Rosamond CDP and in the immediate vicinity can be accurately described as being an old lake bed, with the peaks of buried hills poking up through an otherwise almost perfectly flat surface. The area to the immediate east of Rosamond, for example, is the Air Force Flight Test Center at Edwards Air Force Base, where the Space Shuttle regularly lands.

Some of these peaks of buried hills are within the Rosamond CDP. Unfortunately, other FCC Rules regarding the distance separations that must be maintained between commercial FM broadcast stations, prevent the use of any transmitter site within Rosamond itself. Therefore, the nature of the terrain and the FCC distance separation requirements act in concert to ensure that any proposal for the implementation of Chan. 228A at Rosamond that meets all pertinent FCC Rules and Regulations will exhibit at least some "shadowing" within the Rosamond CDP.

The FCC Rules provide guidance with respect to the characteristics of optimal transmitter locations in 73.315(b), as follows:

"The transmitter location should be chosen to maximize coverage to the city of license while minimizing interference. This is normally accomplished by locating in the least populated area available while maintaining the provisions of paragraph (a) of this section. In general, the transmitting antenna of a station should be located in the most sparsely populated area available at the highest elevation available. The location of the antenna should be so chosen that line-of-sight can be obtained from the antenna over the principle city or cities to be served; in no event should there be a major obstruction in this path."

The Woods proposal clearly meets the intent and the spirit of the above admonition. Specifically,

the requisite predicted signal strength of 70 dBu, calculated in accordance with all pertinent FCC Rules, is provided to the entire community of Rosamond; and

the location is such as to minimize interference, in as much as it does meet all pertinent distance separation requirements. That fact alone is sufficient proof of the minimization of interference, as documented by 73.209(b) of the Rules, which states:

"The nature and extent of the protection from interference afforded FM broadcast stations operating on Channels 221-300 is limited to that which results when assignments are made in accordance with the rules in this subpart."; and

the population in the immediate vicinity of the proposed transmitter site is extremely sparse; according to the 1990 census, there are fewer than eight (8) persons per square kilometer residing within a distance of 3.2 kilometers; and

the transmitter site is at a high location, relative to the community of Rosamond; and

except as impacted by unavoidable terrain features, discussed above, line-of-sight paths are obtained from the Woods site to most locations within the Rosamond CDP.

Unfortunately, the Rules offer no guidance with respect to the final point of advice as offered by §73.315(b); that is, neither a definition of the term "major obstruction" is given nor is any suggestion made as to how one might identify such a terrain feature.

Certainly, the FCC contour prediction method, as outlined in §73.313 of the Rules, takes at least some degree of terrain variation into account. It is simply not reasonable that every minor undulation be deemed to be a "major obstruction." In fact, graphical Figures 1 and 1a of §73.333, which are used in conjunction with effective radiated power and effective antenna height to determine distances to predicted signal strength contours, are designed to include the effects of a 50 (fifty) meter terrain roughness factor.

The terrain roughness factor is defined in §73.313(f), and illustrated by Figure 4 of §73.333. It has a value equal to the distance, in meters, between elevations exceeded by all points on the profile for 10% and 90% respectively, of the length of the profile segment, which normally includes the distance range of between 10 and 50 kilometers from the antenna. If the lowest field strength of interest is initially predicted to occur over a particular propagation path at a distance that is less than 50 kilometers from the antenna, the terrain profile segment used in the determination of the terrain roughness factor over that path must be that included between points 10 kilometers from the transmitter and such lesser distances.

The terrain roughness factor for the portion of the 135 Degree radial that extends from the proposed transmitter site to the far (southeastern) portion of Rosamond has been determined in strict accordance with the method (above) specified by the FCC Rules, and has been found to be 32.0 meters. (A copy of Exhibit E-4 "Predicted Contours" from the Woods application, illustrating the relationship of the standard eight radials to the Rosamond CDP, is included herewith as "Attachment 1".)

Clearly, the 32.0 meter terrain roughness factor, in the general direction of the community of Rosamond from the proposed

transmitter site, is well within the (50 meter) range for which the FCC contour prediction method was designed. There is nothing about the situation that suggests anything unusual or special about the coverage of the community of Rosamond from the transmitter location proposed in BPH-910225MH.

Hitt Informal Objection Based on Flawed Methodology

The Hitt informal objection against BPH-910225MH does not provide any reasoning by which it might be a candidate for consideration by the FCC. The only reference in the FCC Rules to alternative coverage showings in the commercial FM service is found in §73.313(e):

"In cases where the terrain in one or more directions from the antenna site departs widely from the average elevation of the 3 to 16 kilometer section, the prediction method may indicate contour distances that are different from what may be expected in practice. For example, a mountain ridge may indicate the practical limit of service although the prediction method may indicate otherwise. In such cases, the prediction methods should be followed, but a supplemental showing may be made concerning the contour distances such as determined by other means. Such supplemental showing should describe the procedure used and should include sample calculations. Maps of predicted coverage should include both the coverage as predicted by the regular method and the area obtained by the supplemental method. In directions where the terrain is such that antenna heights less than 30 meters for the 3 to 16 kilometer section are obtained, an assumed height of 30 meters must be used for the prediction of coverage. However, where the actual contour distances are critical factors, a supplemental showing of expected coverage must be included together with a description of the method used in predicting such coverage. In special cases, the FCC may require additional information as to terrain and coverage."

As is stated in BPH-910225MH, the average of the terrain in the distance range of 3 through 16 kilometers from the proposed transmitter site, in the direction North 135 Degrees West, is 205 meters below the proposed radiation center, which is 971 meters above mean sea level. By subtraction, the average terrain elevation in this direction, diagonally through Rosamond, is 766 meters.

As was discussed, above, the terrain roughness factor, in the pertinent distance range along this particular radial has been determined to be 32.0 meters. The average height of the terrain in the distance range that was used in the determination of the terrain roughness factor is 723.2 meters, which is 42.8 meters less than the 3 to 16 kilometer average elevation. Simply

stated, different portions of the terrain in the directions that are crucial to the coverage of Rosamond simply do not vary greatly in height.

In sum, the terrain in the direction of Rosamond from the proposed transmitter site conforms to that with which the FCC contour prediction method works best. Indeed, it could serve as a benign example of exactly the sort of terrain for which the FCC prediction method performs best, thereby obviating the need for an alternative propagation showing.

Even if the case at hand were such that a supplemental coverage showing appeared to be in order, the instant informal objection is based upon a computation methodology which does not begin to meet the threshold tests of acceptability under the provisions of §73.313(e). For example, absolutely no sample computations are offered in the objection. Apparently, no attempt was made by Hitt to quantify signal strengths in "shadowed" regions. Rather, the bald assumption was made that any intervention of terrain into a given propagation path would cause a total loss of signal. That is simply not a physical correct fact and no rational is given for this assumption.

Computational Methodology

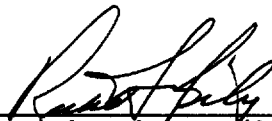
All computations used in the preparation of the instant report were performed in accordance with procedures set forth in the FCC Rules. Terrain data were obtained from U.S. Geological Survey 3 Arc Second Digital Elevation Model (3" DEM) data files.

Summary Statement

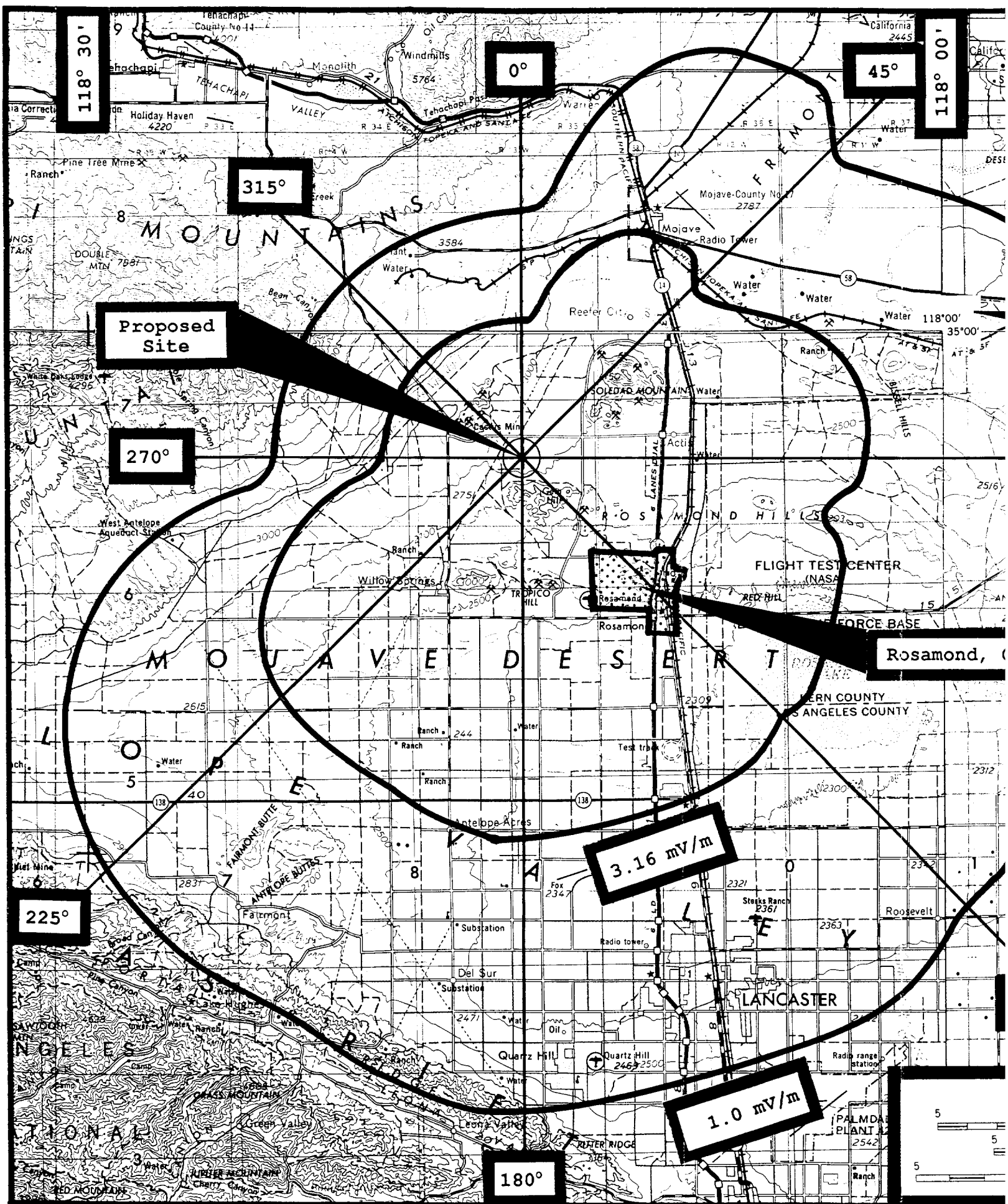
The informal objection to the application of Jamie Leigh Woods for authority to construct a new FM broadcast station to be operated on Channel 228A at Rosamond, California, filed by mutually exclusive applicant Diane K. Hitt is premised on a flawed interpretation of pertinent FCC Rules and has no foundation in fact. Therefore, the instant objection should be denied.

Certification

Under penalty of perjury, I do hereby state that the foregoing is true and correct to the best of my knowledge and belief.



Richard L. Biby,
Registered Professional Engineer
District of Columbia Reg. NO. 5710E
Commonwealth of Virginia Reg. No. 14018
September 5, 1991



Attachment 1
Response to Informal Objection of Diane K. Hitt
Exhibit E-4 of Original Application of Jamie Leigh Woods
"Predicted Contours"

Ch. 228A 93.5 MHz 91m AAT 3.0 kW

Jamie Leigh Woods
FCC File No. BPH-910225MH
Rosamond, California

Prepared By Richard L. Biby
Communications Engineering Services, P.C.
Falls Church, Virginia September, 1991

Original Latitude and
Longitude Markings

Within 1.0 mV/m
(60 dBu) Contour

Population
(1980 U.S. Census):
78,011

Land Area:
2,160 sq. km

Samond, CA

135°

90°

38° 00'

37° 45'

Scale 1:250,000

